PERSONALITY TRAITS AS PREDICTORS OF ANXIETY IN PRESCHOOL AGED CHILDREN

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Abbreviations

1. Diagnostic and Statistical Manual of Mental Disorders (DSM)
2. Preschool Anxiety Scale (PAS)
3. Preschool Anxiety Scale Revised (PASR)
4. Cognitive behavioral therapy (CBT)
5. Child Behavior Checklist (CBCL)

ABSTRACT

PERSONALITY TRAITS AS PREDICTORS OF ANXIETY IN PRESCHOOL AGED CHILDREN

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Research has increasingly been conducted involving personality in preschool aged populations. With regard to psychopathology, anxiety disorders are among the most prevalent within this population. Previous research has examined the relationship between personality and anxiety but not within preschool populations. Moreover, personality factors and anxiety are expressed and assessed differently in preschool populations compared to adults or even older children. To our knowledge, this is the first study to examine the relationship between personality factors and anxiety in preschoolers. Within the present study, preschool teachers completed the M5-PS-35, The Child Behavior Checklist for Ages 1.5-5 (CBCL), and the Preschool Anxiety Scale Revised (PASR; adapted teacher form) on each of the preschool aged participants. Results showed that personality traits were significantly correlated with anxiety in preschoolers. Specifically, the personality trait neuroticism was positively correlated with overall increased anxiety in preschoolers using both measures of anxiety. Additionally, both extraversion and openness to experience were significantly negatively correlated with anxiety using both measures of anxiety. Next, CBCL Anxiety Problems scale and the PASR (adapted teacher form) total anxiety score were positively correlated. Lastly, the predictors extraversion, agreeableness, conscientiousness, neuroticism, openness to experience, and total anxiety using the PASR (adapted teacher form) accounted for significant variability in each of the Syndrome Scales examined. Also, results

suggested that the five factors are predictors of anxiety, using both measures of anxiety. Overall, these findings suggest that the personality factors are predictors of anxiety, as well as predictors of other social, emotional, and behavioral difficulties in preschool aged children.

CHAPTER ONE: INTRODUCTION

Anxiety disorders are the most prevalent type of childhood mental illness (Edwards, Rapee, Kennedy, & Spence, 2010). Anxiety disorders have been a part of the field of psychology and included within the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) since the first edition (Frances et al., 1993). In addition, research suggests that anxiety disorders can be diagnosed in children as young as 2 years old (Carpenter et al., 2015).

In a similar manner, research has shown that personality can be identified in children as young as 2 years old (De Pauw, Mervielde, & Leeuwen, 2009). More recently, researchers have started to incorporate personality into their studies of mental illness (Kotov et al., 2010). Although research has been conducted in regards to personality and anxiety, there is little known about the preschool population with this regard.

Research in the area of childhood anxiety has continued to evolve overtime (Silverman, 2011). Anxiety disorders and temperament are thought to be related (American Psychiatric Association, 2013a). One study compared behavior inhibition, negative affectivity, and positive affectivity in preschool children with and without anxiety disorders (Dougherty et al., 2013). Results revealed preschoolers with anxiety disorders exhibited greater behavior inhibition and less positive affectivity but no differences in negative affectivity (Dougherty et al., 2013). Moreover, other factors observed in preschoolers, such as behavior inhibition and poor social skills, have predicted childhood anxiety disorders (Wichstrom, Belsky, & Berg-Nielsen, 2013). This suggests that identifying predictors in preschool could help implement early intervention that could eliminate or lessen later anxiety symptoms because anxiety in preschoolers has been shown to predict psychopathology later in life (Carpenter et al., 2015). More research is needed

on young children with anxiety disorders in order to further promote the opportunities for prevention and early intervention (Edwards, Rapee, Kennedy, & Spence, 2010). In terms of personality, high neuroticism has been associated with anxiety disorders in adults (Kotov et al., 2010). In conclusion, researching whether personality traits in preschoolers are related to anxiety could help identify at risk children in order to implement early intervention and prevent lifelong anxiety problems.

CHAPTER TWO: LITERATURE REVIEW

Personality

Theories about personality have dramatically evolved over the past few decades. For many years there were different trait models proposed and controversy over which model was the best fit for personality (McCrae & Costa, 2013). Some of the previous prominent models included Eysenck's Personality Inventory (Eysenck & Eysenck, 1964) and Cattell's 16 Personality Factors (Cattell, 1988). The five factor model of personality was originally discovered by Tupes and Christal in 1961 but published in 1992 (Tupes & Christal, 1992). However, that five factor model of personality was only widely accepted within the past few decades. Currently, the five factor model of personality dominates the field (Goldberg, 1993; Grist, Socha, & McCord, 2012; McCrae & Costa, 2013). The five factors within this model include: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (Widiger & Costa, 2013).

Five Factor Model of Personality

The five factor model of personality describes individual differences using traits (McCrae & Costa, 2013). The five factor model of personality is considered to be universal and used to describe both adults and children (Digman, 1997; McCrae & Costa, 1997). Each of the five factors of personality is described below.

Extraversion describes the desired amount and intensity of interactions, activity, stimulation, and ability to experience joy (Widiger & Costa, 2013). Moreover, six facets within the extraversion factor of personality include: warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions (Costa & McCrae, 1995). High extraversion usually

describes individuals who are social, person-orientated, affectionate, and optimistic (Widiger & Costa, 2013). On the other hand, low extraversion typically describes individuals who are more reserved, independent, and quiet (Widiger & Costa, 2013).

Agreeableness describes one's desired interactions, which ranges from compassion to antagonistic interactions (Widiger & Costa, 2013). The six facets within the agreeableness factor of personality include: trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness (Costa & McCrae, 1995). One who is high in agreeableness is typically unselfish, helpful, forgiving, and trusting (Widiger & Costa, 2013). Conversely, low agreeableness is usually associated with individuals who are cynical, impolite, untrusting, uncooperative, and irritable (Widiger & Costa, 2013).

Conscientiousness describes how organized, persistent, and motivated an individual behaves (Widiger & Costa, 2013). The six facets within the conscientiousness factor of personality include: competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Costa & McCrae, 1995). Someone who is high in conscientiousness is usually hard working, goal-orientated, disciplined, and ambitious (Widiger & Costa, 2013). On the other hand, someone who is low in conscientiousness is usually unmotivated, unreliable, and lazy (Widiger & Costa, 2013).

Neuroticism describes one's psychological adjustment (Widiger & Costa, 2013). The six facets within the neuroticism factor of personality include: anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 1995). People who are high in neuroticism typically experience more psychological distress and negative emotions like depressive symptoms, stress, and self-consciousness views of self (Widiger & Costa, 2013).

Low neuroticism is typically associated with individuals who have better emotional adjustment and stability (Smith & Williams, 2015).

Openness to experience describes curiosity and willingness to accept unconventional concepts (Widiger & Costa, 2013). The six facets within the openness factor of personality include: fantasy, aesthetics, feelings, actions, ideas, and values (Costa & McCrae, 1995). Individuals high in openness are typically more creative and imaginative (Widiger & Costa, 2013). Those low in openness are usually more close-minded and conventional or set in their ways (Widiger & Costa, 2013).

Personality versus Temperament

Most research has focused on temperament in young children, which refers to biological and stable individual differences that appear from birth and continue throughout one's lifetime (De Pauw, Mervielde, & Leeuwen, 2009). Personality describes the development of traits that is influenced both by genetics and by experiences (Grist & McCord, 2010). Unlike personality, there is not a consensus in regards to dimensions of temperament (De Pauw, Mervielde, & Leeuwen, 2009). Moreover, there has been a shift so that research is no longer exclusively examining temperament in young children, but now also researching personality in young children too (Grist, Socha, & McCord, 2012).

Recent research has examined the relationship between temperament and personality. While, there is not a consensus on the constructs that are described within temperament, personality theory is dominated by the five factor model (De Pauw, Mervielde, & Leeuwen, 2009). Personality historically described adult individual differences and was thought to be different from temperament seen in children (De Pauw, Mervielde, & Leeuwen, 2009).However, the theoretical differences between personality and temperament are not empirically supported

(Grist & McCord, 2010). Moreover, the five factor model of personality has consistently been observed and researched within children, as young as preschool age (Grist, Socha, & McCord, 2012). In one study, researchers examined reliability of temperament and personality in preschoolers (De Pauw, Mervielde, & Leeuwen, 2009). Results revealed that both temperament and personality were acceptable measures of individual differences in preschoolers but personality scales resulted in higher reliability when compared to temperament scales (De Pauw, Mervielde, & Leeuwen, 2009). Another study compared temperament and personality in preschoolers. Within this study, researchers used the temperaments: surgency, negative affect, and effortful control (Grist & McCord, 2010). In terms of personality, the five factor model was used: extraversion, agreeableness, conscientiousness, neuroticism, and openness (Grist & McCord, 2010). Results showed significant correlations between surgency and extraversion, negative affect and neuroticism, and effortful control and conscientiousness (Grist & McCord, 2010). Researchers concluded that these results suggest that the five factor model of personality adequately encompasses individual differences in preschoolers (Grist & McCord, 2010). Therefore, there is no longer a need for both constructs. Rather, this research suggests that personality measures subsume temperament (Grist, Socha, & McCord, 2012).

Assessing Personality in Preschoolers

There are many assessment tools that measure the five factor model of personality. However, the M5-PS-35 is the only measure of the five factor model of personality that has been validated for use on preschool populations (Grist, Socha, & McCord, 2012). In fact, the M5-PS-35 was specifically developed to measure personality in young children (Grist, Socha, & McCord, 2012). Originally, the M5-PS-35 contained 90 items (Grist & McCord, 2010). To improve reliability and validity, the number of items was reduced to 35 items (Grist, Socha, &

McCord, 2012). M5-PS-35 item examples include "is friendly towards peers" (extraversion), "loves to help people" (agreeableness), "completes tasks successfully" (conscientiousness), "is afraid of many things" (neuroticism), and "adapts to new activities" (openness to experience).

Personality and Psychopathology

The relationship between personality and mental health has been increasingly a topic of interest over the years. Previous research has examined the association between mental illness and personality traits. Kotov et al. (2010) conducted a meta-analysis on 175 studies that looked at these relationships. The meta-analysis included big five and big three personality models in comparison with depressive, anxiety, and substance use disorders. However, these studies were limited to adult participants. Consistent across studies and diagnoses, participants with those disorders produced results that were high on neuroticism and low on conscientiousness. Also, neuroticism was the strongest correlate with all of the disorders examined (Kotov et al., 2010).

Other examples of psychopathology and personality studies include Bienvenu et al. (2004) and Vreeke and Muris's (2012) studies. Bienvenu et al. (2004) conducted a study examining the relationship between the five factor model of personality and anxiety and depressive disorders with adult samples. They found an association between neuroticism and extraversion with anxiety and depressive disorders (Bienvenu et al., 2004). In fact, simple phobia, social phobia, agoraphobia, panic disorder, obsessive compulsive disorder, generalized anxiety disorder, major depressive disorder, and dysthymia all resulted in significant correlations with neuroticism (Bienvenu et al., 2004). Extraversion was negatively correlated with social phobia, agoraphobia, and dysthymia (Bienvenu et al., 2004). Vreeke and Muris (2012) conducted a study with children, although, only as young as 6 years old. The results of this study revealed a relationship indicating that clinically anxious children were higher on neuroticism but

lower on extraversion, conscientiousness, and openness (Vreeke & Muris, 2012). Overall, in various previous research has examined relationships between personality and mental illness but this research has not extended to children as young as preschool age.

Anxiety

Some level of anxiety is a normal part of everyday life and is even adaptive. However, excess of anxiety can become problematic, with childhood anxiety having lasting negative effects that carry over into adulthood (Sawyer & Nunez, 2014). Furthermore, anxiety disorders are among the most stable lifetime disorders, with an earlier onset than many other disorders (Edwards, Rapee, Kennedy, & Spence, 2010).

Anxiety Disorders

Anxiety disorders is a category within the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM 5; American Psychiatric Association, 2013a), which is the most widely used classification for mental disorders. Anxiety disorders include extreme fear and anxiety and subsequent disturbances in behavior (American Psychiatric Association, 2013a). Some of the disorders within this category include separation anxiety disorder, specific phobia, social anxiety disorder (or social phobia), and generalized anxiety disorder (American Psychiatric Association, 2013a). Separation anxiety disorder and social anxiety disorder describe fear and anxiety related to social situations (Carpenter et al., 2015). However, separation anxiety disorder is specific to fear involving the separation from an attachment figure (American Psychiatric Association, 2013a). On the other hand, social anxiety disorder involves fears that exist across social situations and has a specific component regarding the fear of scrutiny by others (American Psychiatric Association, 2013a). Generalized anxiety disorder is not specific to social situations but rather, involves pervasive worry with regard to a variety of situations and stimuli in the past,

present, and/or future (Carpenter et al., 2015). Lastly, specific phobia involves fear about a specific stimuli or situation (American Psychiatric Association, 2013a). Overall, these disorders have a commonality of anxious distress and impairment in functioning (Carpenter et al., 2015).

Anxiety in Preschoolers

Anxiety is the most prevalent mental health problem for children but a limited amount of research has specifically explored anxiety disorders or treatment in children as young as preschool age (Sawyer & Nunez, 2014). Although the research is limited, some studies have illustrated anxiety in preschool. Two examples that exemplified anxiety in preschoolers include Richman, Stevenson, and Graham's (1975) findings that 12.8% of their sample of 3-year olds had significant fears and Ialongo, Edelsohn, Werthamer-Larsson, Crockett, and Sheppard's (1994, 1995) findings that 2.5% of their sample of 5-year olds had significant anxiety symptoms that were stable over 4 months. Other research sampled 5-year olds, who reported symptoms of anxiety and struggled years later as well (Spence, Rapee, McDonald, & Ingram, 2001).

Anxiety in preschoolers has been researched in order to determine if there are different subtypes within anxiety, consistent with adult anxiety disorders (Spence, Rapee, McDonald, & Ingram, 2001). Results revealed groups consistent with social phobia, separation anxiety, generalized anxiety, obsessive–compulsive disorder, and fears of physical injury, which were associated with the DSM-IV diagnostic categories (Spence, Rapee, McDonald, & Ingram, 2001). However, obsessive-compulsive symptoms in children at such a young age are rare (Edwards, Rapee, Kennedy, & Spence, 2010). More recently, subtypes of anxiety disorders have been observed in preschool aged children including: generalized anxiety disorder, social anxiety, and separation anxiety (Carpenter et al., 2015). Edwards, Rapee, Kennedy, and Spence (2010) also

found symptoms consistent with these disorders in preschool populations with the addition of specific fears.

Anxiety in preschoolers presents in a variety of ways that may differ from typical adult presentations, including nighttime fears (Kushnir, Gothelf, & Sadeh, 2013). Moreover, preschool age children have been reported to have fears that involve particular stimuli or events (like animals or imaginary beings), which differs from typical adult fears or even older children's fears (Spence, Rapee, McDonald, & Ingram, 2001). These differences (for example, crying when a parent drops a preschool age child off at school) necessitate alternative measures in order to assess anxiety at such a young age.

Assessing Anxiety in Preschoolers

A limited number of validated measures of anxiety, fear, and worry currently exist for assessment of children as young as preschool age (Edwards, Rapee, Kennedy, & Spence, 2010). Since anxiety in preschoolers presents differently than it does for adults, and even differently than for older children, alternative measures are needed to assess anxiety in preschoolers. Moreover, consistent with other measures for preschoolers, parents or teachers are needed to fill out the anxiety measures, rather than the children themselves due to developmental appropriateness.

The Spence Children's Anxiety Scale, which is widely validated and accepted, was created by the same researcher who made the Preschool Anxiety Scale (Spence, 1997; Spence, 1998; Spence, Barrett, & Turner, 2003). The Preschool Anxiety Scale (PAS; Spence, Rapee, McDonald, & Ingram, 2001) and the Preschool Anxiety Scale Revised (PASR; Edwards, Rapee, Kennedy, & Spence, 2010) are the only measurement scales used for preschoolers that specifically measure a variety of anxiety symptoms. The symptoms assessed in the PAS are

consistent with generalized anxiety disorder, social phobia, separation anxiety disorder, obsessive-compulsive disorder, and physical injury fears (Spence, Rapee, McDonald, & Ingram, 2001). The PAS scales, both total score and subscale scores, correlate appropriately with the Child Behavior Checklist (CBCL; Achenbach, 1991). Pearson correlations resulted in a correlation of .68 between mothers' PAS total score and the mothers' CBCL Internalizing total score (Spence, Rapee, McDonald, & Ingram, 2001).

The PAS five subscale model was a good fit but researchers wanted to make it an even better fit for the data with the PASR (Edwards, Rapee, Kennedy, & Spence, 2010). The PAS measure is based on the DSM-IV category of anxiety disorders but symptoms consistent with obsessive compulsive disorder were removed from the PASR because of low psychometric properties of this subscale and the low occurrence of symptoms in this age group (Edwards, Rapee, Kennedy, & Spence, 2010). This is also consistent with the changes in the DMS 5, in which obsessive compulsive disorder is no longer included within the anxiety disorders category (American Psychological Association, 2013b).

There is a teacher and a parent version of the original PAS. The difference between the parent version and the child version of the scale is due to the context of the interaction between the person completing the measure and the child. The teacher version has two items that the parent version does not: "repeatedly asks about parent(s) during the day" and "cries for parent whilst at preschool/school" (Spence, Rapee, McDonald, & Ingram, 2001). The original PAS (Teacher Form) has been shown to have good psychometric properties (Ghanbari, Rabieenejad, Ganje, & Khoramzadeh, 2013). However, there was not a teacher form created for the PASR. Therefore, the PASR was adapted for the purposes of this study in order to be appropriate for preschool teachers to use. The PASR (adapted teacher form) measures symptoms of overall

anxiety and four subscales within anxiety: social anxiety disorder, separation anxiety disorder, generalized anxiety disorder, and specific fears (Edwards, Rapee, Kennedy, & Spence, 2010). Nonetheless, these subscales were not used for the purposes of the present study.

Teacher Evaluations of Preschoolers

Most research that has examined anxiety in preschoolers has used assessments completed by parents (e.g. Carpenter et al., 2015; Dougherty et al., 2013; Edwards, Rapee, Kennedy, & Spence, 2010). Conversely, limited research has been conducted using teacher evaluations of anxiety in preschoolers (Ghanbari, Rabieenejad, Ganje, & Khoramzadeh, 2013). Nonetheless, teacher forms, like the CBCL, have been shown to be reliable measure of children's behaviors (Arnold & Dobbs-Oates, 2013). Teacher evaluations of preschoolers have also accurately predicted later functioning (Dirks, Boyle, & Georgiades, 2011). Moreover, teacher evaluations are oftentimes used in order to determine if there is a need for early interventions for preschoolers (Arnold & Dobbs-Oates, 2013). Lastly, researchers have suggested that teacher screening for anxiety is appropriate for preschool aged children (Beatson et al., 2014).

Factors Related to Preschool Anxiety Disorders

Research has looked for predictors of anxiety in preschoolers. One such study used two questionnaires, 12 months apart, to determine if parental negative affectivity, child inhibition, parent overprotection, and life events were associated with anxiety in preschoolers. Parents completed these questionnaires on preschoolers. Results suggested that anxiety in preschoolers was stable over the yearlong span. Moreover, results indicated that anxiety in preschoolers was predicted by preschoolers' mothers' overprotection, impact of negative events, preschoolers' inhibition, and mothers' negative affectivity based on results from the questionnaires completed by mothers. Based on questionnaires completed by fathers, anxiety in preschoolers was

predicted by fathers' overprotection and impact of negative events. Overall, anxiety over the course of a year was consistent in preschoolers. In addition, the following predictors of anxiety were revealed suggesting that parents' overprotection, life events, and preschoolers' inhibition, all influence preschool anxiety (Edwards, Rapee, & Kennedy, 2010).

Previously, researchers have examined correlations between certain factors and preschool anxiety disorders. In Dougherty et al.'s study (2013) these factors included temperament, comorbid disorders, parent psychopathology, parenting styles, recent life stressors, and demographics of parents and children. Results suggested that preschoolers with anxiety disorders were more likely to have depressive disorder, oppositional defiant disorder, and problems sleeping. Results also suggested that preschoolers with anxiety disorders were more likely to exhibit behavioral inhibition and less likely to exhibit positive affectivity, but the anxiety disorders were unrelated to negative affectivity, in terms of temperament. Taken as a whole, there was not a relationship between parental psychopathology and preschool anxiety disorders. Yet, when maternal anxiety disorders were looked at alone, preschoolers with anxiety disorders were more likely to have mothers' with recent (within one month) anxiety disorders. Preschoolers with anxiety disorders reported more life stressors within the past six months when compared to preschoolers without anxiety disorders. Compared to preschoolers without anxiety disorders, mothers of preschoolers with anxiety disorders reported lower ratings of support for their children, higher ratings of being authoritarian, and higher ratings of being permissive. In a similar manner, fathers of preschoolers with anxiety disorders reported higher ratings of being permissive when compared to fathers of preschoolers without anxiety disorders. However, parenting behavior was the one factor discussed that did not remain significant after correcting for multiple comparisons within this study. Nonetheless, this research suggests that there are a

variety of factors that are associated with preschool anxiety disorders. Additionally, these factors could be used to provide intervention or prevention programs to at risk children (Dougherty et al., 2013).

In one longitudinal study, researchers examined the brains of preschool children who were previously identified with generalized anxiety, separation anxiety, and social phobia. Results indicated amygdala-prefrontal dysregulation compared to preschool children who were also assessed but did not have anxiety problems. These results suggest that anxiety in preschoolers can predict later amygdala-prefrontal dysregulation and that anxiety in preschoolers may impact brain functioning later in childhood. Moreover, there were differences among the three types of anxiety disorders used in this study, suggesting that specific anxiety disorders affect brain functioning slightly differently (Carpenter et al., 2015).

Researchers have looked at the relationship between nighttime fears, temperament, and anxiety in preschoolers. Effortful control was the specific temperament factor these researchers studied. Effortful control refers to the ability to appropriately inhibit behavior and pay attention to stimuli, altering one's attentional focus appropriately. Problems with effortful control are related to problem behaviors. A certain level of nighttime fears are a part of typical development in young children. However, severe nighttime fears can be problematic for functioning. Effortful control would allow children to pay attention to stimuli that are unrelated to the feared stimuli at night and inhibit maladaptive responses. Fears are related to anxiety in young children and nighttime fears may be a component of anxiety disorders, as previous research has found that children with nighttime fears were more likely to have anxiety disorders. The results of the study looking at these three factors indicated that preschool age children with severe nighttime fears had high levels of other fears too compared to preschoolers who did not struggle with

severe nighttime fears. These children had more behavioral problems. The results also suggested that children with nighttime fears had more problems with regard to effortful control, specifically the attention component of effortful control. Overall, this study suggests that children with nighttime fears have higher fears in general, internalizing problems, and problems with effortful control. Further, nighttime fears may help identify preschool age children who are at increased risk of developing anxiety disorders (Kushnir, Gothelf, & Sadeh, 2013).

Treatment and Prognosis

Anxiety disorders are among the most chronic disorders, with onset occurring at a younger age than many other disorders (Edwards, Rapee, Kennedy, & Spence, 2010). Preschoolers are rarely referred to treatment for anxiety but early intervention could help prevent lifetime anxiety problems (Edwards, Rapee, Kennedy, & Spence, 2010). In recent years, however, research has expanded in order to develop and evaluate efficacies of interventions for children as young as preschool age.

Cognitive behavioral therapy (CBT) has been shown to reduce anxiety symptoms in children consistently across many studies (Sawyer & Nunez, 2014). Within this analysis, only one of the 10 studies that Sawyer and Nunez (2014) examined involved treatment for children as young as 4 years old, with the rest of the age ranges beginning at 7 or 8 years old. Yet, other studies have provided empirical support for CBT as effective for treating anxiety in children as young as preschool age (Creswell et al., 2010; Carlyle, 2014; Barrett, Fisak, & Cooper, 2015; Donovan & March, 2014). A program called Fun FRIENDS with a CBT framework has been empirically validated as a prevention and intervention program for anxiety in children as young as preschool aged (Carlyle, 2014; Barrett, Fisak, & Cooper, 2015). Fun FRIENDS is a group intervention that incorporates both children and parents (Carlyle, 2014). In previous studies, it

has provided benefits both in community and clinical settings (Barrett, Fisak, & Cooper, 2015). One version of CBT has been evaluated for preschool aged children, an internet-based and parent-focused approach of CBT (Donovan & March, 2014). The results suggested that children experienced improvements as a result of the intervention, both immediately after the completion of treatment and 6 months afterwards. (Donovan & March, 2014). On a whole, a variety of studies have provided support for the efficacy of CBT based intervention and prevention programs for young children with anxiety (Creswell et al., 2010; Carlyle, 2014; Barrett, Fisak, & Cooper, 2015; Donovan & March, 2014).

Psychopharmacological treatment has been reported to be successful in helping children with anxiety disorders. Yet this should be interpreted with caution as this research has rarely included preschool age children with anxiety disorders. Moreover, when researchers studied the efficacy of a medication, escitalopram, on preschool aged children with disorders, including anxiety disorders, the results were less promising. While escitalopram did provide improvements for those with anxiety disorders, it also caused side effects in the majority of the participants. This was thought to be a result of the young age of the preschool children. Behavior disinhibition was the most common side effect. The researchers suggest taking caution when considering the use of escitalopram in preschool age children but that it may be helpful in extreme cases or for those who have not improved with psychosocial treatment (Coşkun, Öztürk, & Zoroğlu, 2012).

Present Study

Preschool age children have been described as children ages between ages 3 and 5. Research has shown that personality and behaviors in preschoolers are related (Hilbig, Glockner, Zettler, 2014). In fact, preschool personality traits have been found to be predictors of

behavioral characteristics in young children (DePauw et al. 2009; Markey et al. 2004). Therefore, personality may also be related to mental illness in preschool populations. This is a population of interest because there is such a limited number of studies that have looked at mental illness in preschoolers.

In terms of childhood psychopathology, anxiety disorders are the most prevalent category of disorders (Edwards, Rapee, Kennedy, & Spence, 2010). Anxiety in preschoolers predicts psychopathology later in life (Carpenter et al., 2015). Anxiety in young children has lasting effects, in part because anxiety hinders psychosocial development (Sawyer & Nunez, 2014). It can also result in academic problems (Sawyer & Nunez, 2014). Early intervention could help prevent these negative effects and could help reduce the amount or intensity of anxiety symptoms later in life.

Previous research has examined the correlation of personality factors, specifically neuroticism, with anxiety and depression (Kotov et al., 2010). However, the association between personality and anxiety in the preschool population has not been studied. Personality traits and anxiety present somewhat differently in preschool populations. To our knowledge, this is the first report that has looked at the relationship between personality and anxiety in preschoolers.

Hypotheses

Hypothesis 1: The personality trait neuroticism will be positively correlated with overall increased anxiety in preschoolers. The personality trait extraversion will be negatively correlated with overall increased anxiety in preschoolers.

Hypothesis 2: The CBCL Anxiety Problems scale and the PASR (adapted teacher form) total anxiety score will be positively correlated.

Hypothesis 3: The PASR (adapted teacher form) and personality characteristics will simultaneously account for most of the variability in the CBCL Syndrome scales.

CHAPTER THREE: METHODOLOGY

Participants

The present study included preschool aged participants between ages 3 and 5. Teachers completed the personality and anxiety measures on children in their classrooms. Preschool participants consisted of 194 preschoolers, 107 (55.2%) males and 87 (44.8%) females. With regards to ethnicity, 60.3% were Caucasian, 21.1% were Black, 10.3% were Latino, and 8.2% were in the Other category.

Measures

M5-PS-35. This scale measures the five factors of personality: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. It uses a 5-point Likert scale (0: totally irrelevant, 1: somewhat irrelevant, 2: neither, 3: somewhat relevant, and 4: very relevant). The comparative fit index was .743, indicating good validity. In addition, all of the items resulted in high factor loadings for each of their respective factors, further indicating good construct validity. In terms of reliability, the Cronbach's alpha for each of the five factors were .90 for agreeableness, .87 for conscientiousness, .77 for extraversion, .79 for neuroticism, and .71 for openness to experience (Grist, Socha, & McCord, 2012).

Preschool Anxiety Scale Revised. PASR measures overall anxiety, as well as four domains of anxiety: social anxiety, generalized anxiety, separation anxiety, and specific fears. PASR uses a 5-point Likert scale (0: not at all true, 1: seldom true, 2: sometimes true, 3: quite often true, 4: very often true). In terms of reliability and validity, the total scale and 4 subscales showed strong internal consistency (alphas = .72-.92), test-retest reliability for 12-month stability (rs = .60-.75), and maternal/paternal agreement (rs = .60-.75). Moreover, results showed strong

correlations between the PASR total scale and anxiety disorder diagnoses (r=.73) indicating acceptable construct validity (Edwards, Rapee, Kennedy, & Spence, 2010).

An adapted teacher form of the PASR was used in this study. The adaptation involved the following changes: two of the items were changed to match the original PAS Teacher Form, which had good psychometric properties (Spence, 2001; Ghanbari, Rabieenejad, Ganje, & Khoramzadeh, 2013). This involved changing the reference to parents instead of "you" (questions 9 and 12 in Appendix A). Four more items were removed, two because those fears would likely not present themselves or be discussed in a preschool setting and the other two because the fears had to do with sleeping, again something the teacher may not be aware of: is afraid of doctors and/or dentists, is nervous of going swimming, would be upset at sleeping away from home, and has nightmares (Edwards, Rapee, Kennedy, & Spence, 2010). The Child Behavior Checklist was used to examine anxiety alongside the Preschool Anxiety Scale Revised adapted teacher form because the adapted form has not yet been validated.

Child Behavior Checklist. The Child Behavior Checklist for Ages 1.5-5 (CBCL/1.5-5) was completed by teachers using The Caregiver-Teacher Report Form. This measure includes syndrome scales: Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawn, Attention Problems, Aggressive Behavior, and Sleep Problems. This measure also includes DSM orientated scales: Affective Problems, Anxiety Problems, Pervasive Developmental Problems, Attention Deficit/Hyperactivity Problems, Stress Problems, Autism Spectrum Problems, and Oppositional Defiant Problems. For the purposes of this study only the DSM orientated scale, Anxiety Problems, was evaluated. This measure uses a 3-point Likert scale (0: not true [as far as you know], 1: somewhat or sometimes true, and 2: very true or often true of

the child). This measure also obtains demographic information with regard to the preschoolers (Achenbach & Rescorla, 2001).

The test-retest reliability of the Child Behavior Checklist was as follows: minimum of 0.68, maximum of 0.92, and average of 0.85 using Pearson correlations (Achenbach & Rescorla, 2001). Construct validity has also been evaluated and confirmed (Ha, Kim, Song, Kwak, & Eom, 2011; Ivanova et al., 2010; Pandolfi et al., 2009; Tan et al., 2006). In a similar manner, criterion validity has been evaluated and confirmed (Muratori et al., 2011).

Procedure

Preschool teachers were recruited from an early childhood program at a Southeastern university. Students were offered extra credit for participating in the study. These teachers completed the M5-PS-35, The Child Behavior Checklist for Ages 1.5-5 (CBCL/1.5-5), and the Preschool Anxiety Scale Revised (adapted teacher form) on each of the preschool age participants. Teachers were asked to complete the questionnaires on up to 20 students each within their classrooms.

CHAPTER FOUR: RESULTS

Pearson correlations were computed on the 5 scales of the M5-PS-35 and the PASR (adapted teacher form), correlating overall anxiety scores with the five factors of personality. The results are as follows: PASR total anxiety and extraversion were negatively correlated ($r = -.261$, $N = 194$, $p = .01$), PASR total anxiety and agreeableness were not correlated, PASR total anxiety and conscientiousness were not correlated, PASR total anxiety and neuroticism were positively correlated ($r = .455$, $N = 194$, $p = .01$), and PASR total anxiety and openness to experience were negatively correlated ($r = -.163$, $N = 194$, $p = .05$).

Table 1

Correlations between Five Personality Domains and PASR Total Anxiety

	Extraversion	**Agreeableness**	**Conscientious**	**Neuroticism**	**Openness**
PASR Total Anxiety	-.261**	.040	-.005	.455**	-.163*

*p<.05, **p<.01

Pearson correlations were computed on the 5 scales of the M5-PS-35 and the Anxiety Problems scale of the CBCL. Similar to the PASR, the results of the correlation between the Anxiety Problems scale on the CBCL and the five factors of personality are as follows: Anxiety Problems and extraversion were negatively correlated ($r = -.350$, $N = 194$, $p = .01$), Anxiety Problems and agreeableness were not correlated, Anxiety Problems and conscientiousness were

not correlated, Anxiety Problems and neuroticism were positively correlated (r = .513, N = 194, p = .01), and Anxiety Problems and openness to experience were negatively correlated (r = -.175, N = 194, p = .05). In addition, the Anxiety Problems scale and the PASR total anxiety were positively correlated (r = .710, N = 194, p = .01).

Table 2

Correlations of the CBCL Anxiety Problems with the Five Personality Domains and PASR Total Anxiety

	Extraversion	**Agreeableness**	**Conscientious**	**Neuroticism**	**Openness**	**PASR Total Anxiety**
CBCL Anxiety Problems	-.350**	.036	-.043	.513**	-.175*	.710**

*p<.05, **p<.01

A multiple linear regression analysis was computed to predict the Syndrome scales on the CBCL based on the M5-PS-35 five factors of personality and the PASR (adapted teacher form) total anxiety score. A significant regression was found (F(6,187) = 37.861, p< .05), with an adjusted R square of .534 for dependent variable Emotionally Reactive Syndrome scale. A significant regression was found (F(6,187) = 40.625, p< .05), with an adjusted R square of .552 for dependent variable Anxious/Depressed Syndrome scale. A significant regression was found (F(6,187) = 10.197, p< .05), with an adjusted R square of .222 for dependent variable Somatic Complaints Syndrome scale. A significant regression was found (F(6,187) = 22.478, p< .05), with an adjusted R square of .400 for dependent variable Withdrawn Syndrome scale. A significant

regression was found (F(6,187) = 45.060, p< .05), with an adjusted R square of .578 for dependent variable Attention Problems Syndrome scale. A significant regression was found (F(6,187) = 66.956, p< .05), with an adjusted R square of .672 for dependent variable Aggression Syndrome scale. Lastly, a significant regression was found (F(6,187) = 42.476, p< .05), with an adjusted R square of .563 for dependent variable Anxiety Problems DSM Scale.

Table 3

Multiple Regression Analysis of Five Factor Model and PASR Total Anxiety Problems on Emotionally Reactive and Anxious/Depressed Syndrome Scales

	Emotionally Reactive			Anxious/Depressed		
Variable	B	SE (B)	β	B	SE (B)	β
Extraversion	-.390	.170	-.144*	-.494	.172	-.178**
Agreeableness	-.703	.140	-.348**	-.203	.142	-.097
Conscientiousness	-.150	.199	-.066	.041	.201	.018
Neuroticism	.775	.144	.348**	.699	.146	.306**
Openness	.500	.206	.199*	.314	.207	.122
PASR Anxiety	.050	.009	.332**	.078	.009	.508**
Adjusted R^2		.534			.552	
F		37.861**			40.625**	

*p<.05, **p<.01

Table 4

Multiple Regression Analysis of Five Factor Model and PASR Total Anxiety Problems on Attention Problems and Aggression Syndrome Scales

	Attention Problems			Aggression		
Variable	B	SE (B)	β	B	SE (B)	β
Extraversion	1.343	.353	.228**	-.965	.711	-.072
Agreeableness	-.789	.291	-.179**	-8.820	.586	-.876**
Conscientiousness	-3.424	.413	-.688**	.579	.833	.051
Neuroticism	-.238	.299	-.049	-1.017	.603	-.092
Openness	.071	.426	.013	-.648	.858	-.052
PASR Anxiety	.032	.018	.098	.087	.036	.116*
Adjusted R^2		.578			.672	
F		45.060**			66.956**	

*p<.05, **p<.01

Table 5

Multiple Regression Analysis of Five Factor Model and PASR Total Anxiety Problems on Somatic Complaints Syndrome Scale and Anxiety Problems DSM Scale

	Somatic Complaints			Anxiety Problems		
Variable	B	SE (B)	β	B	SE (B)	β
Extraversion	-.129	.096	-.109	-.361	.142	-.155*
Agreeableness	-.194	.080	-.218*	.169	.117	.097
Conscientiousness	.148	.113	.148	-.058	.166	-.030
Neuroticism	.228	.082	.234**	.513	.120	.268**
Openness	.095	.116	.087	.215	.171	.100
PASR Anxiety	.018	.005	.280**	.072	.007	.560**
Adjusted R^2		.222			.563	
F		10.197**			42.476**	

*p<.05, **p<.01

Multiple linear regressions were also calculated in order to assess the five factors of personality as predictors of anxiety. A multiple linear regression analysis was computed to predict the PASR (adapted teacher form) total anxiety score based on the M5-PS-35 five factors of personality. A significant regression was found ($F(5,188) = 14.074$, $p < .05$), with an adjusted R square of .253 for dependent variable total anxiety on the PASR (adapted teacher form). A multiple linear regression analysis was computed to predict the Anxiety Problems scale on the CBCL based on the M5-PS-35 five factors of personality. A significant regression was found

(F(5,188) = 20.141, p< .05), with an adjusted R square of .332 for dependent variable Anxiety Problems scale. Overall, the results provided several significant findings.

Table 6

Multiple Regression Analysis of Five Factor Model on PASR Total Anxiety Problems and the CBCL Anxiety Problems Scale

	Total Anxiety Problems			CBCL Anxiety Problems		
Variable	B	SE (B)	β	B	SE (B)	β
Extraversion	-1.515	1.434	-.084	-.470	.175	-.202**
Agreeableness	1.824	1.178	.135	.301	.144	.173*
Conscientiousness	2.674	1.678	.175	.135	.204	.068
Neuroticism	7.600	1.086	.512**	1.062	.132	.555**
Openness	-1.290	1.733	-.077	.122	.211	.056
Adjusted R^2		.253			.332	
F		14.074**			20.141**	

*p<.05, **p<.01

CHAPTER FIVE: DISCUSSION

This study was important because, to our knowledge, it was the first to examine personality factors and anxiety in preschool age children. Nonetheless, anxiety is one of the most prevalent mental illnesses in child populations, as young as preschool age (Barrett, Fisak, & Cooper, 2015). Therefore, there is a need for increased research within preschool populations, as it relates to anxiety. As a result, these findings may aid in identifying at-risk children in order to provide early prevention and interventions. This is especially important because anxiety in preschool age children is predictive of psychopathology later in life (Carpenter et al., 2015).

Hypotheses Discussed

Similar to previous studies conducted with adults and older children, personality traits were significantly correlated with anxiety in preschoolers, as well contributing unique variance to anxiety in preschoolers (Kotov et al., 2010; Vreeke & Muris, 2012; Mulder & Aken, 2014; Bienvenu et al., 2004). Specifically, part of the first hypothesis was confirmed: the personality trait neuroticism was positively correlated with overall increased anxiety in preschoolers using both measures of anxiety. Additionally, both extraversion and openness to experience were significantly negatively correlated with anxiety using both measures of anxiety. As with previous research with adults, neuroticism was the strongest correlate with anxiety (Kotov et al., 2010).

The second hypothesis was supported: the CBCL Anxiety Problems scale and the PASR (adapted teacher form) total anxiety score were positively correlated. This suggests that the measures were examining similar constructs. Therefore, the adaptations made to the PASR did not detract from its ability to measure overall anxiety in preschoolers. Moreover, the CBCL

Anxiety Problems scale produced only slightly stronger correlations with the five factors of personality, again suggesting that the PASR (adapted teacher form) is suitable for measuring anxiety in preschool aged children.

The third hypothesis was supported in that the predictors extraversion, agreeableness, conscientiousness, neuroticism, openness to experience, and total anxiety using the PASR (adapted teacher form) accounted for significant variability in each of the Syndrome Scales examined. These findings were consistent with a previous study suggesting personality domains contribute to behavioral problems in preschool populations (Assary, Salekin, & Barker, 2015). However, these findings did not add to our knowledge with regard to personality traits as predictors of anxiety in preschool aged children. As a result, analyses were also conducted examining the five factors of personality as predictors of anxiety. Results suggested that the five factors are predictors of anxiety, using both measures of anxiety. Specifically, neuroticism contributed unique variance to anxiety using both measures, while agreeableness and extraversion contributed unique variance to anxiety using only the CBCL. Overall, these findings suggest that the five factor model of personality contributes not only to anxiety problems in preschool populations but also to other social, emotional, and behavioral problems based on the CBCL regression results.

Previous Personality Research

The findings of the present study confirm previous research to some extent. Across many studies, a relationship existed between neuroticism and anxiety (Kotov et al., 2010; Vreeke & Muris, 2012; Mulder & Aken, 2014; Bienvenu et al., 2004). This relationship was also found in the present study. However, the literature varies with regard to the relationship between anxiety and the other factors of personality. Specifically, some studies have found relationships between

extraversion and anxiety, while others have found relationships between agreeableness and anxiety. The present study found a relationship between openness to experience and anxiety, as well as a relationship between extraversion and anxiety. The varying relationships may be due to the manner in which anxiety is expressed among different age groups, as previous research found differences between anxiety in older and younger adults (Wuthrich, Johnco, & Wetherell, 2015). Additionally, preschool children typically have less control over the activities that they engage in when compared to adults or even older children, potentially contributing to openness to experience producing a significant negative correlation with anxiety in the present study.

Research conducted in the past has produced results suggesting a relationship exists between the five factors of personality and anxiety in children, though this research was not conducted on young children of preschool age. Previous research found negative correlations between extraversion and anxiety and openness and anxiety, as well as a positive correlation between neuroticism and anxiety in children as young as 6 years old (Vreeke & Muris, 2012). These findings were confirmed for younger children but the results of the previous study by Vreeke and Muris (2012) suggesting a negative relationship existed between anxiety and conscientiousness were not demonstrated in the present study. This difference may be related to the age difference. Additionally, Vreeke and Muris (2012) differentiated between clinically and non-clinically anxious children, which could contribute to the differences when compared to the present study, which did not differentiate between clinical and non-clinical anxiety in preschool aged children. Using multiple regressions, another study with children as young as 8 years old, researchers found relationships between anxiety and the five factor model of personality (Muris, Mayer, & Schubert, 2010). In this study, unique variances were found for neuroticism and extraversion contributing to anxiety symptoms (Muris, Mayer, & Schubert, 2010). A positive

relationship existed between anxiety and neuroticism, while a negative relationship existed between extraversion and anxiety symptoms (Muris, Mayer, & Schubert, 2010). Similar unique variances were found in the present study. Like the previous study, neuroticism contributed unique proportions of the variances in the PASR total anxiety score. Neuroticism also contributed unique proportions of the variance in the CBCL Anxiety Problems scale. Nevertheless, extraversion and agreeableness only accounted for unique variance in the CBCL Anxiety Problems scale. This may be due to the CBCL being a more sensitive tool for measuring anxiety in preschool aged children. Regardless, the present study produced results largely consistent with previous studies on older children and adults.

One study examined personality traits in preschool aged children, as it relates to conduct problems and callous-unemotional problems (Assary, Salekin, & Barker, 2015). The results of this study include agreeableness significantly predicting callous-unemotional problems and conduct problem scores, as well as a small variance from openness to experience contributing to callous-unemotional problem scores (Assary, Salekin, & Barker, 2015). Although not directly related to the present study, the findings of the previous study are consistent with results with regard to the five factor model of personality relating to difficulties for preschool aged children (Assary, Salekin, & Barker, 2015).

Implications

The present study offers several implications resulting from the statistically significant findings. First, while the CBCL is appropriate to assess a range of difficulties, the PASR and PASR (adapted teacher form) may be useful when specifically interested in preschool anxiety (Edwards, Rapee, Kennedy, & Spence, 2010). Although the present study did not examine the different domains within anxiety, these domains may be beneficial in future studies or in clinical

settings in order to provide the most appropriate care (Edwards, Rapee, Kennedy, & Spence, 2010). However, for the purposes of the present study, the total anxiety score served as an appropriate measurement of an overall general construct of anxiety in preschool populations. Still, the PASR is the only measurement tool used to assess a wide range of anxiety symptoms in preschool aged children and the present study promotes continued use in future studies (Edwards, Rapee, Kennedy, & Spence, 2010).

With regard to personality, previous research suggested that children struggling with social anxiety were less likely to experience victimization when they had higher levels of extraversion, serving as a protective factor against bullying victimization (Mulder & Aken, 2014). In that study, agreeableness was also suggested to be a protective factor against bullying victimization for socially anxious male children (Mulder & Aken, 2014). This study suggested there may be differences between genders with regard to personality factors and anxiety, which may be an opportunity for exploration in future studies (Mulder & Aken, 2014). The absence of a relationship between anxiety and agreeableness in the present study may be due to the younger population used in this study and the lack of differentiation between male and female children. Nonetheless, the previous and present study taken together suggest that personality factors may serve as predictors of increased risks as well as protective factors against negative problems associated with anxiety (Mulder & Aken, 2014).

Preschool is a crucial time for social and emotional development (Classen, 2015). While preschool inherently provides opportunities for social development, there may be increased needs for emotional education or similar interventions (Classen, 2015; Upshur, Wenz-Gross, & Reed, 2013). Providing screenings such as the CBCL and the M5-PS-35 could provide increased knowledge about which children are at greatest risks for difficulties with social, emotional, and

behavioral problems. Moreover, knowing this could promote engagement in prevention and intervention programs. The multiple regressions in the present study suggested that personality factors are related to various social, emotional, and behavioral difficulties experienced by preschool aged children. Using both screening tools could provide identification of the most at risk children and provide opportunities for interventions.

Some programs that have provided benefits for preschool age children include Fun FRIENDS and other forms of CBT used with preschool aged children (Creswell et al., 2010; Carlyle, 2014; Barrett, Fisak, & Cooper, 2015; Donovan & March, 2014). These interventions have provided benefits in clinical and community settings (Barrett, Fisak, & Cooper, 2015). As a result, using the screening measure in preschool may provide opportunities for prevention and intervention in preschool settings or in clinical settings.

Limitations and Future Directions

Some limitations of the present study include using an adapted version of a validated measure, due to the limited availability of anxiety measures validated for use with preschool children. The measure was modified in order to be appropriate for use by teachers, rather than parents. However, another validated measurement of anxiety, the CBCL, was used in order to accommodate this limitation (Achenbach & Rescorla, 2001). Another limitation involves the nature of the reports. Rather than behavioral observations by the researchers, this study relied on the reports completed by teachers, leaving the data subject to bias. Additionally, the data collected was primarily on Caucasian participants, potentially limiting the generalizability of the results. Moreover, the correlational nature of the data creates other limitations. The results can only provide suggestions, without claiming causal relationships exist, as causation cannot be determined.

Future research should examine personality and anxiety as it relates to the implementation of intervention and prevention programs targeting anxiety in preschool aged children. Future research could also utilize parental ratings, rather than exclusively teacher ratings. Future research should involve behavioral observations as well as reports from teachers and parents, to assess the consistency of observations and reports. The PASR was an effective measure of anxiety, but the results did not suggest that it was more sensitive than the CBCL. Consequently, either measure would be acceptable for future research. Future research should explore whether certain personality factors serve as protective factors from various difficulties in preschool aged children. Subsequent research should also involve longitudinal studies of anxiety that presents in preschool age to determine whether personality factors influence the longevity of anxiety. Lastly, future directions should include personality factors as it relates to success in prevention and intervention programs. Since there is a relationship between personality factors and anxiety, it would be beneficial to also know whether the personality factors influence the efficacy of various intervention and prevention programs in order to provide children with the most beneficial programs based on their needs.

Conclusion

The present study supports previous research suggesting a relationship between personality and anxiety exists. In conclusion, the five factor model of personality may help identify preschool age children at risk for anxiety problems, as they are predictors of anxiety. Using the M5-PS-35 as an additional screener may help identify at risk preschool children who may not be presently experiencing symptoms. Because anxiety in preschool predicts anxiety later in life, these screenings may also help identify which children may need continued screenings throughout their childhood, even if the symptoms are not currently negatively

impacting functioning. Regardless, early interventions and dissemination of such interventions is needed because anxiety symptoms often present in preschool age and can last across the lifetime (Barrett, Fisak, & Cooper, 2015). Overall, this study adds to the current knowledge about anxiety in preschool aged children and provides a foundation for future research with personality factors as they relate to psychopathology in preschool aged children.

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APPENDIX A: PRESCHOOL ANXIETY SCALE REVISED ADAPTED TEACHER FORM

CHILDHOOD CONCERNS SURVEY

Below is a list of items that describe children. For each item please circle the response that best describes your child. Use the scale below from not at all true to very often true. Please answer all the items as well as you can, even if some do not seem to apply to your child.

0	1	2	3	4
Not at all true	Seldom true	Sometimes true	Quite often true	Very often true

1. Has difficulty stopping him/herself from worrying..... 0 1 2 3 4
2. Worries that he/she will do something to look stupid in front of other people..... 0 1 2 3 4
3. Is scared to ask an adult for help (e.g., a preschool or school teacher) 0 1 2 3 4
4. Is scared of heights (high places) 0 1 2 3 4
5. Is afraid of meeting or talking to unfamiliar people..... 0 1 2 3 4
6. Worries that something bad will happen to his/her parents 0 1 2 3 4
7. Is scared of thunderstorms..... 0 1 2 3 4
8. Is afraid of talking in front of the class (preschool group) e.g., show and tell..... 0 1 2 3 4
9. Worries that something bad might happen to him/her (e.g., getting lost or kidnapped), so he/she won't be able to see parents again..... 0 1 2 3 4
10. Worries that he/she will do something embarrassing in front of other people..... 0 1 2 3 4
11. Is afraid of insects and/or spiders..... 0 1 2 3 4
12. Becomes distressed about parents leaving him/her at preschool…….. 0 1 2 3 4
13. Is afraid to go up to a group of children to join their activities. 0 1 2 3 4
14. Is frightened of dogs..... 0 1 2 3 4
15. Worries about doing the right thing..... 0 1 2 3 4
16. Is afraid of the dark..... 0 1 2 3 4
17. Asks for reassurance when it doesn't seem necessary..... 0 1 2 3 4
18. Is wary of large animals..... 0 1 2 3 4
19. Acts shy and quiet around new people..... 0 1 2 3 4

20. Seems nervous in new or unusual situations..... 0 1 2 3 4

21. Gets upset if s/he makes a mistake..... 0 1 2 3 4

22. Becomes distressed if separated from parents…….. 0 1 2 3 4

23. Gets upset if something unexpected happens……..…… 0 1 2 3 4

24. Is afraid of loud noises……..…… 0 1 2 3 4

M5-PS-35 Questionnaire ©

Cathy L. Grist and David M. McCord
Western Carolina University

Child's Name: _____ Age: _____ M F
Date:_____

Child's Ethnicity (circle one): White Black Hispanic Asian Native American Other

Teacher's Name: _____ Years of Experience: _____

This is a personality questionnaire, which should take about 10 minutes. There are no right or wrong answers to these questions; you simply respond with the choice that describes the child best.

Without spending too much time dwelling on any one item, just give the first reaction that comes to mind.

In order to score this test accurately, it is very important that you answer *every* item, without skipping any. You may change an answer if you wish

		Totally Irrelevant	Somewhat Irrelevant	Neither	Somewhat Relevant	Very Relevant
1	Worries about things	O	O	O	O	O
2	Has a vivid imagination	O	O	O	O	O
3	Completes tasks successfully	O	O	O	O	O
4	Breaks rules	O	O	O	O	O
5	Is easy to satisfy	O	O	O	O	O
6	Likes to solve complex problems	O	O	O	O	O
7	Radiates joy	O	O	O	O	O
8	Tries to excel at what they do	O	O	O	O	O
9	Is always on the go	O	O	O	O	O
10	Has a lot of fun	O	O	O	O	O
11	Is afraid of many things	O	O	O	O	O
12	Works hard	O	O	O	O	O
13	Becomes overwhelmed by events	O	O	O	O	O
14	Is relaxed most of the time	O	O	O	O	O
15	Does not understand things	O	O	O	O	O
16	Gets upset easily	O	O	O	O	O
17	Knows how to get around the rules	O	O	O	O	O
18	Loves to help others	O	O	O	O	O
19	Yells at people	O	O	O	O	O
20	Gets stressed out easily	O	O	O	O	O

21	Tells the truth	O	O	O	O	O
22	Is interested in many things	O	O	O	O	O
23	Does the opposite of what is asked	O	O	O	O	O
24	Insults people	O	O	O	O	O
25	Has difficulty starting tasks	O	O	O	O	O
26	Likes to begin new things	O	O	O	O	O
27	Gets back at others	O	O	O	O	O
28	Laughs aloud	O	O	O	O	O
29	Acts without thinking	O	O	O	O	O
30	Adapts easily to new situations	O	O	O	O	O
31	Doesn't see the consequences of things	O	O	O	O	O
32	Amuses his/her friends	O	O	O	O	O
33	Messes things up	O	O	O	O	O
34	Is demanding	O	O	O	O	O
35	Finishes what he/she starts	O	O	O	O	O

APPENDIX C: CHILD BEHAVIOR CHECKLIST

For office use only ID #

CHILD'S FULL NAME First Middle Last

CHILD'S GENDER
Boy Girl

CHILD'S AGE

CHILD'S ETHNIC GROUP OR RACE

TODAY'S DATE
Mo._____Day_____Year
_____

CHILD'S BIRTHDATE
Mo._____Day_____Year
_____

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Feel free to write ad- ditional comments beside each item and in the space provided on page 2. ***Be sure to answer all items.***

Name & address of school or care facility:
_____

PARENTS' USUAL TYPE OF WORK, even if not working now. *Please be specific — for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.*

FATHER'S TYPE OF WORK
_____

MOTHER'S TYPE OF WORK
_____

THIS FORM FILLED OUT BY: (print your full name)

Your role at the school or care facility:
pimarily educational (teacher) primarily care (caregiver) Your training for this position:
_____
_____

Your experience in child care or early education:
_____years
.

What kind of a facility is it? (Please be specific, e.g., home day care, day care center, nursery school, preschool, school readiness class, Early Childhood Special Education, Headstart, Kindergarten, etc.)

What is the average number of children in the child's group or class? _____children in the child's group or class.

How many hours per week does this child spend at the facility? ____hours per week.

For how many months have you known this child? ____months.

How well do you know him/her? 1. Not well 2. Moderately well 3. Very well

Has he/she ever been referred for a special education program or special services? Don't know 0
No 1 Yes - what kind and when?

Below is a list of items that describe children. For each item that describes the child ***now or within the past 2 months***, please circle the ***2*** if the item is ***very true or often true*** of the child. Circle the ***1*** if the item is ***somewhat or sometimes true*** of the child. If the item is ***not true*** of the child, circle the ***0***. Please answer all items as well as you can, even if some do not seem to apply to the child.

0= Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

0	**12**	1. Aches or pains (without medical cause; **do not** include stomach or headaches)	**012**	22.	Cruelty, bullying, or meanness to others
0	**12**	2. Acts too young for age	**012**	23.	Doesn't answer when people talk to him/her
0	**12**	3. Afraid to try new things	**012**	24.	Difficulty following directions
0	**12**	4. Avoids looking others in the eye	**012**	25.	Doesn't get along with other children
0	**12**	5. Can't concentrate, can't pay attention for long	**012**	26.	Doesn't know how to have fun; acts like a little adult
0	**12**	6. Can't sit still, restless, or hyperactive	**012**	27.	Doesn't seem to feel guilty after misbehaving
0	**12**	7. Can't stand having things out of place	**012**	28.	Disturbs other children
0	**12**	8. Can't stand waiting; wants everything now	**012**	29.	Easily frustrated
0	**12**	9. Chews on things that aren't edible	**012**	30.	Easily jealous
0	**12**	10. Clings to adults or too dependent	**012**	31.	Eats or drinks things that are not food—***do not*** include sweets (describe): _____
0	**12**	11. Constantly seeks help			
0	**12**	12. Apathetic or unmotivated			
0	**12**	13. Cries a lot	**012**	32.	Fears certain animals, situations, or places other than daycare or school (describe):
0	**12**	14. Cruel to animals			
0	**12**	15. Defiant			
0	**12**	16. Demands must be met immediately			
0	**12**	17. Destroys his/her own things	**012**	33.	Feelings are easily hurt
0	**12**	18. Destroys property belonging to others	**012**	34.	Gets hurt a lot, accident-prone
0	**12**	19. Daydreams or gets lost in his/her thoughts	**012**	35.	Gets in many fights
0	**12**	20. Disobedient	**012**	36.	Gets into everything
0	**12**	21. Disturbed by any change in routine	**012**	37.	Gets too upset when separated from parents

012 38. Explosive and unpredictable behavior
012 39. Headaches (without medical cause)
012 40. Hits others
012 41. Holds his/her breath
012 42. Hurts animals or people without meaning to
012 43. Looks unhappy without good reason
012 44. Angry moods
012 45. Nausea, feels sick (without medical cause)
012 46. Nervous movements or twitching (describe):

012 47. Nervous, highstrung, or tense
012 48. Fails to carry out assigned tasks
012 49. Fears daycare or school
012 50. Overtired
012 51. Fidgets
012 52. Gets teased by other children
012 53. Physically attacks people
012 54. Picks nose, skin, or other parts of body (describe):

012 55. Plays with own sex parts too much
012 56. Poorly coordinated or clumsy
012 57. Problems with eyes without medical cause (describe):

012 58. Punishment doesn't change his/her behavior
012 59. Quickly shifts from one activity to another
012 60. Rashes or other skin problems (without medical cause)
012 61. Refuses to eat
012 62. Refuses to play active games
012 63. Repeatedly rocks head or body
012 64. Inattentive, easily distracted
012 65. Lying or cheating
012 66. Screams a lot
012 67. Seems unresponsive to affection
012 68. Self-conscious or easily embarrassed
012 69. Selfish or won't share
012 70. Shows little affection toward people

0 1 2 71. Shows little interest in things around him/her
0 1 2 72. Shows too little fear of getting hurt
0 1 2 73. Too shy or timid
0 1 2 74. Not liked by other children
0 1 2 75. Overactive
0 1 2 76. Speech problem (describe): _____
0 1 2 77. Stares into space or seems preoccupied
0 1 2 78. Stomachaches or cramps (without medical
0 1 2 79. Overconforms to rules
0 1 2 80. Strange behavior (describe):

0 1 2 81. Stubborn, sullen, or irritable
0 1 2 82. Sudden changes in mood or feelings
0 1 2 83. Sulks a lot
0 1 2 84. Teases a lot
0 1 2 85. Temper tantrums or hot temper
0 1 2 86. Too concerned with neatness or cleanliness
0 1 2 87. Too fearful or anxious
0 1 2 88. Uncooperative
0 1 2 89. Underactive, slow moving, or lacks energy
0 1 2 90. Unhappy, sad, or depressed
0 1 2 91. Unusually loud
0 1 2 92. Upset by new people or situations (describe): _____

0 1 2 93. Vomiting, throwing up (without medical cause)
0 1 2 94. Unclean personal appearance
0 1 2 95. Wanders away
0 1 2 96. Wants a lot of attention
0 1 2 97. Whining
0 1 2 98. Withdrawn, doesn't get involved with others
0 1 2 99. Worries
100. Please write in any problems the child has that were not listed above.
0 1 2 _____
0 1 2 _____
0 1 2 _____

Underline any you are concerned about.

Does the child have any illness or disability (either physical or mental)? Circle: No Yes— Please describe:

What concerns you most about the child?

Please describe the best things about the child:

APPENDIX D: INFORMED CONSENT

Informed Consent

You are being asked to participate in a research study on personality characteristics, behavior characteristics, and anxiety in young children. Your participation is voluntary. The purpose of the study is to investigate personality traits, behavioral characteristics, and anxiety in pre-school aged children.

You will be asked to complete a 35-item rating form describing their personality characteristics, a 24-item rating form describing anxiety, and a 100- item rating form describing behavioral characteristics. Each rating will require approximately 10-20 minutes.

The research data are entirely confidential, and neither your identity nor the identities of the children you answer the surveys on will be revealed.

Your signature below indicates that you have read and agreed to these statements.

Questions about this study should be addressed to:

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_____ _____

Signature Date